WHAT IS CLAIMED IS:

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1. ~~In a driving~~ method for a liquid crystal display device comprising selecting simultaneously a plurality of lines of row electrode in a liquid crystal display device comprising a plurality of row electrodes and a plurality of column electrodes and applying predetermined voltages to the selected lines of row electrode during a selection period, the driving method being characterized in that:

the selection period of a display frame is divided, and column electrodes are driven with a voltage pattern so as to reduce a change of voltage level in each of the ~~divided periods.~~

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2. The driving method for a liquid crystal display device according to Claim 1, wherein in two continuous display frames to be displayed, the time ratio of a display frame period to the other is determined to have a figure selected from a range of 50 to 90%; the selection period of at least one of the two display frames is divided into two portions, and on-data and off-data are mixed in each of the divided periods in a combination of at least one in the two display frames to effect a gradation display by pulse width modulation.

3. The driving method for a liquid crystal display device according to Claim 2, wherein the time ratio between the two continuous display frames to be displayed is 4:3 and the selection period of a shorter frame is divided to have a time ratio of 2:1.

4. The driving method for a liquid crystal display device according to Claim 2, wherein the time ratio between the two continuous display frames to be displayed is 9:6; the selection period of a longer frame is divided to have a time ratio of 8:1, and the selection period of a shorter frame is divided to have a time ratio of 4:2.

5. The driving method for a liquid crystal display device according to Claim 2, wherein on-data and off-data are mixed in each of the divided periods in two sets of combination of the two display frames to effect a gradation display by pulse width modulation.

6. The driving method for a liquid crystal display device according to Claim 1, wherein an imaginary row is formed in addition to the lines of row electrode; a selection period is divided into a plurality of divided periods; a voltage pattern is changed so as to reduce a change point of voltage level applied to column electrodes in the one selection period, and a gradation display is effected by applying voltages to column electrodes according to the changed voltage pattern.

7. The driving method for a liquid crystal display device according to Claim 1, wherein an imaginary row is formed in addition to the lines of row electrode; a selection period is divided uniformly into a plurality of divided periods; a voltage pattern to be applied to column electrodes is determined, and a gradation display is effected by applying voltages to column electrodes

with use of a voltage pattern in which there is a single change point of voltage level to be applied to the column electrodes in one selection period.

8. In a driving method for a display device having display elements in a matrix form and producing voltage levels for effecting a gradation display, the method for a display device being characterized in that:

in a plurality of continuous display frames, a time of at least one frame period is made different from that of other frame period,

the selection period of at least one frame in the plurality of display frames is divided into divided selection periods,

on-data and off-data are provided in the selection period of the non-divided frame period and the divided selection periods to produce a plurality of voltage levels, and

the plurality of voltage levels are used for a display except for the voltage levels in the vicinity of the highest level and the lowest level.

9. The driving method for a display device according to Claim 8, wherein among the plurality of voltage levels, voltage levels in the vicinity of the highest level and the lowest level are used relatively rare and voltage levels in an intermediate region are used relatively often.

10. The driving method for a display device according to

Claim 8, wherein the method is used for driving a liquid crystal display device wherein a multiple line simultaneously selecting method is used.

11. The driving method for a display device according to Claim 8, wherein in producing an m number of intermediate voltages between A and B where A represents the highest voltage level and B represents the lowest voltage level among the plurality of voltage levels, the number of gradation levels q selected from a range of not less than L and less than U given by Formulas (1) and (2) satisfies the relation of Formula (3):

$$L=(A-B) \times 0.25+B \quad \ldots(1)$$

$$U=(A-B) \times 0.75+B \quad \ldots(2)$$

$$0.55<q/m<0.75 \quad \ldots(3)$$

12. The driving method for a display device according to Claim 9, wherein in producing an m number of intermediate voltages between A and B where A represents the highest voltage level and B represents the lowest voltage level among the plurality of voltage levels, the number of gradation levels q selected from a range of not less than L and less than U given by Formulas (1) and (2) satisfies the relation of Formula (3):

$$L=(A-B) \times 0.25+B \quad \ldots(1)$$

$$U=(A-B) \times 0.75+B \quad \ldots(2)$$

$$0.55<q/m<0.75 \quad \ldots(3)$$

13. The driving method for a display device according to Claim 10, wherein among the plurality of voltage levels,

voltage levels in the vicinity of the highest level and the lowest level are used relatively rare and voltage levels in an intermediate level are used relatively often.

14. The driving method for a display device according to Claim 10, wherein in producing an m number of intermediate voltages between A and B where A represents the highest voltage level and B represents the lowest voltage level among the plurality of voltage levels, the number of gradation levels q selected from a range of not less than L and less than U given by Formulas (1) and (2) satisfies the relation of Formula (3):

$$L=(A-B) \times 0.25+B \quad ...(1)$$

$$U=(A-B) \times 0.75+B \quad ...(2)$$

$$0.55<q/m<0.75 \quad ...(3)$$

15. The driving method for a display device according to Claim 13, wherein in producing an m number of intermediate voltages between A and B where A represents the highest voltage level and B represents the lowest voltage level among the plurality of voltage levels, the number of gradation levels q selected from a range of not less than L and less than U given by Formulas (1) and (2) satisfies the relation of Formula (3):

$$L=(A-B) \times 0.25+B \quad ...(1)$$

$$U=(A-B) \times 0.75+B \quad ...(2)$$

$$0.55<q/m<0.75 \quad ...(3)$$

16. ~~In a driving device~~ for a liquid crystal display ~~device~~ for selecting simultaneously a ~~plurality~~ of lines

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of row electrode in a liquid crystal display device comprising a plurality of row electrodes and a plurality of column electrodes and applying predetermined voltages to the selected row electrodes during a selection period, the driving device being characterized by comprising a driving means for driving column electrodes according to a predetermined voltage pattern in each period formed by dividing a selection period of a display frame.

17. In a driving device for a liquid crystal display device for selecting simultaneously a plurality of lines of row electrode in a liquid crystal display device comprising a plurality of row electrodes and a plurality of column electrodes and applying predetermined voltages to the selected row electrodes during a selection period, the driving device being characterized by comprising a driving means comprises:

a timing control means which forms a combination of at least one of two continuous display frames in which the time ratio of a display frame period to the other is within 50 - 90%, and supplies to column drivers for driving column electrodes, a timing signal so that a selection period of at least one of the two continuous display frames is divided into two portions to produce an n (n: an integer of at least three) number of divided periods,

a gradation processing means for producing n-bit gradation data based on inputted image data to write the

n-bit gradation data in frame memories, and

a column data producing means for producing column data by reading sequentially the n-bit gradation data which are stored in the frame memories in the respective divided periods and supplying the produced data to the column drivers.

18. The driving device for a liquid crystal display device according to Claim 17, wherein the timing control means produces the timing signal so that the total time of the continuously displayed two display frames is equal to a time of an input frame to which image data are inputted.

19. The driving device for a liquid crystal display device according to Claim 16, wherein the driving device is adapted to select simultaneously a plurality of lines of row electrode and an imaginary row in a liquid crystal display device comprising a plurality of row electrodes and a plurality of column electrodes and apply predetermined voltages to the selected row electrodes during a selection period, and wherein the driving means comprises a gradation processing means for producing gradation data based on inputted image data to write the gradation data in frame memories, and a column data producing means for determining a voltage pattern to be applied to column electrodes in each period which is formed by dividing uniformly a selection period, whereby control is made so that when there are a plurality of

change points of voltage level to be applied to the column electrodes in a selection period, only one change point is provided.

20. The driving device for a liquid crystal display device according to Claim 16, wherein the driving means comprises:

a timing control means which provides timing signals to column drivers for driving column electrodes so that the frame period of at least one frame in a plurality of continuous display frames is made different from that of other frame, and the selection period of at least one frame in the plurality of display frames is divided to form divided selection periods,

a gradation processing means including a circuit for producing gradation data based on inputted image data to writs the gradation data in frame memories, wherein the gradation data are such that the number of gradation levels q selected from a range of not less than L and less than U given by Formulas (1) and (2) satisfies the relation of Formula (3) in producing an m number of intermediate voltages between A and B where A represents the highest voltage level and B represents the lowest voltage level among the plurality of voltage levels, and

a column data producing means which produces column data by reading sequentially gradation data stored in the frame memories in the selection period of a frame in the plurality of frames and the selection period of a

subframe, the produced column data being supplied to the column drivers:

$$L=(A-B) \times 0.25+B \quad \ldots(1)$$

$$U=(A-B) \times 0.75+B \quad \ldots(2)$$

$$0.55<q/m<0.75 \quad \ldots(3)$$

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